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PUBLIC UTILITIES
COMMISSION

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Application of	)	
	)	
PUBLIC UTILITIES COMMISSION	)	DOCKET NO. 2008-0273
	)	
Instituting a Proceeding to Investigate the Implementation of Feed-in Tariffs.	)	

DIVISION OF CONSUMER ADVOCACY'S COMMENTS ON RELIABILITY STANDARDS

Pursuant to the Order Setting Schedule filed on October 29, 2009, as amended by the Hawaii Public Utilities Commission's ("Commission") February 17, 2010 letter and the Commission's Order Granting Extension Request filed on March 11, 2010,[1] the Division of Consumer Advocacy ("Consumer Advocate") hereby submits the following comments on the Reliability Standards.

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[1] The Order Granting Extension Request filed on March 11, 2010 was filed in response to the HECO Companies' request for an additional extension of time, as described in the HECO Companies' February 23, 2010 letter. The HECO Companies include Hawaiian Electric Company, Inc., Maui Electric Company Limited, and Hawaii Electric Light Company, Inc.

I. BRIEF PROCEDURAL HISTORY.

On February 8, 2010, reliability standards were proposed by: (1) the HECO Companies; (2) Blue Planet Foundation ("Blue Planet"); and (3) Clean Energy Maui LLC ("Clean Energy Maui") and Zero Emissions Leasing LLC ("Zero Emissions").

On February 19, 2010, the Commission directed the HECO Companies to further elaborate on their proposed reliability standards.

On February 26, 2010, the HECO Companies responded to the Commission, which included their "Proposed Conceptual Framework for Reliability Standards Working Group" ("Working Group Framework").

On March 15, 2010, the parties in the instant proceeding filed comments on the HECO Companies proposed Reliability Standards Working Group.

II. CONSUMER ADVOCATE COMMENTS.

In its comments filed on March 15, 2010, the Consumer Advocate did not oppose the idea of the HECO Companies' Reliability Standards Working Group ("RSWG") as it would "hopefully result in a more transparent process that will: (1) provide an independent evaluation of the current state of the HECO Companies' electric system and determine the amounts of renewable energy that can be incorporated onto the HECO Companies' existing systems and the impacts, if any, to system reliability; and (2) provide an independent assessment and evaluation of the different reliability standards proposed . . . [by the other parties in the proceeding (i.e., Blue Planet and Clean Energy Maui and Zero Emissions, jointly)] to determine a reasonable manner in which to proceed."

The Consumer Advocate continues to support this recommendation. The Consumer Advocate notes that the HECO Companies' have deemed for the HECO system, based on its system analysis, that an initial distributed generation ("DG") penetration level of 60 MW is feasible, based on high level steady state scenario analysis and several tens of megawatts more of DG could possibly be accommodated, however additional more refined studies are needed.[2] As for the MECO and HELCO systems, the HECO Companies propose that the timing of the implementation of the FIT be subject to review by the proposed RSWG.

The Consumer Advocate believes that the proposed RSWG would provide the transparency necessary in allowing the parties in the proceeding to be included in the process to independently assess and evaluate the current state of the HECO Companies' systems and either confirm or refute the HECO Companies' assertions regarding its systems.

Presently, the HECO Companies must comply with General Order No. 7 which contains broad reliability standards for voltage, frequency and reliability, and HECO files regular reports with the Commission concerning their reliability performance. The General Order No. 7 standards have been in effect for a long time, and were developed based on traditional utility system operations that primarily involved the economic dispatch of fossil-fueled central stations striving for lowest reasonable costs to ratepayers. The transition from a paradigm of a fossil-fueled central station based utility with a delivery system designed for the "one-way" flow of energy, to a power supply

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[2] HECO Companies Standards, Attachment 1, page 2 and the HECO's Companies February 26, 2010 letter, page 3.

system consisting of intermittent renewable resources dispersed such that the delivery system must now accommodate a "two-way" flow of energy cannot be made without allowing for a learning curve and without some compromises. As a practical matter, the initial development of reliability standards will most likely be fluid and involve standards to be added to General Order No. 7 requirements that address the circumstances on each island. The Commission seems to suggest as much in its Decision and Order filed on September 25, 2009 ("D&O") where it states "[T]he standards should complement existing standards," and provides the following example of "[f]or instance, minimum load standard could demonstrate whether additional wind generation could be added to the HELCO and MECO grids without harming reliability or directly leading to more curtailment of existing renewables during off-peak hours."[3] The Commission also appears to require the reliability standards to be fluid and evolving, by stating: "*The standards should also be flexible, based on experience and changes in system* conditions. The commission asks that the HECO Companies modify the standards for each company after each year of the FIT's operations, or more frequently if appropriate, to reflect changes to transmission, distribution, generation, demand, generation mix, ancillary services availability, the results of ongoing studies, and any other relevant factors."[4]

Thus, the initial development of reliability standards should favor the RSWG concept over the NERC-styled standards, which would likely be less flexible, and more rigidly inclined toward absolute in disposition that would be more functional in a

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[3] D&O, pages 50 and 51.

[4] Id, page 51.

developed renewable energy based system. The RSWG concept is evolving and transitioning from a traditional fossil-fueled central station system with a delivery system designed for the one-way flow of energy. Further discussion on concerns with the proposed reliability standards is offered below.

In supporting the RSWG concept, the Consumer Advocate noted that several details associated with the RSWG can be discussed upon establishment of the group such as: (1) the scope of the technical studies; (2) the costs associated with the RSWG; (3) from whom the costs should be borne by; and (4) the composition of the membership of the RSWG;[5] and (5) processes and procedures of the working group.

The Consumer Advocate notes that two parties (i.e., Blue Planet and Zero Emissions) do not support the proposed RSWG and have recommended the Commission open a new docket in which the focus would be the development of formal North American Electric Reliability Corporation ("NERC") equivalent reliability standards for the HECO Companies that "can be used to properly and accurately assess the capacity of the HECO Companies' system to accept VERs [variable energy resources] generation.[6]

The opening of such a docket to focus only on the NERC reliability standards would be premature as it has not been established that such standards is the most reasonable approach for the following reasons. First, the Consumer Advocate noted that further review and evaluation would be necessary to determine how the NERC

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5 "Division of Consumer Advocacy's Comments on the Proposed Working Group Preliminary Plan," filed March 15, 2010.

6 Blue Planet Comments on the HECO Companies Proposed Conceptual Framework for Reliability Standards Working Group, filed March 15, 2010, page 16.

guidelines and standards may need to be revised to consider the HECO Companies' distribution facilities as NERC and other regional reliability organizations relate to generation and transmission facilities.

Second, although Blue Planet notes that the NERC reliability standards are stakeholder-driven with the oversight of an independent entity, it should be recognized that the NERC has formalized procedures in developing its standards which include but would not be limited to the following: (1) that the process to be done mostly in written form; (2) that the requester for development, revision, or withdrawal of a standard may be any person (organization, company, government agency, individual, etc.), be responsible for the request and responses to the public comments associated with its request; (3) that upon a consensus based need of the standard, the actual language of the standard is drafted by the NERC Drafting Standards Team; (4) that field testing is performed; and (5) that voting on the standard is based on a weighting of the votes by the following segments which are part of the bulk power system: (a) Transmission Owner; (b) Regional Transmission Organizations and Independent System Operators; (c) Load-Serving Entities; (d) Transmission Dependent Utilities; (e) Electric Generators; (f) Electricity Brokers, Aggregators; and Marketers; (g) Large Electricity End Users; (h) Small Electricity End Users; (i) Federal, State, and Provincial Regulatory or other Government Entities; and (j) Regional Reliability Organizations and Regional Entities.[7]

Lastly, it should be noted that the NERC is currently reviewing its bulk power system planning and operations in light of high levels of variable resources (e.g., wind,

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[7] NERC "Reliability Standards Development Procedure, Version 7," FERC Approved: February 5, 2010.

solar, ocean, and some forms of hydro) planned for North America. The NERC has created an Integrated Variable Generation Task Force ("IVGTF"), which filed a report, "Accommodating High Levels of Variable Generation," dated April 2009 ("IVGTF Report").

As noted by the IVGTF Report:

> The electric industry in North America is on the brink of one of the most dynamic periods in its history. The ongoing efforts brought together by this report have the potential to fundamentally change the way the system is planned, operated, and used – from the grid operator to the average residential customer. Maintaining the reliability of the bulk power system during this transition will be critical measure of success as these efforts progress.[8]

In addition, the Consumer Advocate generally supports the idea of developing reliability standards. This position has been offered in various docketed proceedings, such as in the recent Docket No. 2009-0005, which examined the island wide outage that occurred on the island of Oahu in 2008.[9] The Consumer Advocate, however, anticipates that the development of establishing formal reliability standards may be a lengthy process. Thus, if the proposed development of NERC-like standards is pursued in this jurisdiction, there is concern that any such effort might result in a lengthy process and would result in indefinitely suspending the ability of developers from participating in FIT based projects. Processes to analyze and develop comprehensive reliability studies and standards should be developed to allow interested and qualified stakeholders to participate in the processes. It is likely that such efforts will need to be

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[8] IVGTF Report, Executive Summary, page iv.

[9] See, for example, the Consumer Advocate recommendation on page 18 that outlines the proposed requirement that the utility should be required to conduct a comprehensive evaluation from a reliability and cost standpoint.

periodic as it is likely that with any one significant project, whether generation, transmission or distribution in nature will affect the findings of earlier studies. Such efforts should not, however, unnecessarily delay the implementation of FIT.

Furthermore, in reviewing the NERC Reliability Standards, the Consumer Advocate notes that the responsibilities of the entities that connect to the bulk power system in North America are set forth in these standards. To the extent that the parties are in the process of establishing reliability standards for the HECO Companies' electric system, it may seem reasonable that the responsibilities for each generation entity (e.g., independent power producer, distributed generation developer) be included in the standards developed at this time as it is anticipated that these entities would have significant impact on the electric system. Several questions would need to be answered prior to taking such a direction such as: (1) what are the other parties' thoughts on such an undertaking; (2) would setting such standards for other entities at this time limit their ability to implement new technologies; (3) how would such standards be enforced as only the HECO Companies are currently regulated by the Commission; (4) what are the procedures for establishing such reliability standards (e.g., whether field testing would be put in place to determine the impact of such standards); and (5) what is the process by which to assess costs, reliability and the goal of promoting renewable energy penetration prior to establishing a standard as each factor would need to be balanced and evaluated to determine the impact on ratepayers. Prior to establishing any formal reliability standards for the HECO Companies system, the Consumer Advocate believes that these questions need to be answered.

At this time, FIT is perceived as a very important tool or means by which the State can advance the objective of significantly reducing its reliance on imported fuels, especially imported fossil fuels. With this understanding, it should be the State's objective is to implement FIT as soon as possible. Rapid deployment does not seem likely if NERC-like standards must be developed. Instead, there should be an understanding that comprehensive analysis and resulting standards will be developed. However, in the meantime, the RSWG may serve as the focused, nimble vehicle through which Hawaii can develop sufficient analysis and, as appropriate, standards to enable FIT to be implemented.

As previously indicated, the development of reliability standards considerations will require a balancing, and likely compromising, of competing policy and public interest goals to accommodate as many new renewables as possible, while not harming reliability or leading to curtailments of renewables, and minimizing cost impact to ratepayers. While there may be a dispute between the HECO Companies and some of the parties on the ability of the neighbor island electric systems to accommodate more renewables, there is a consensus that reliability and curtailment constraints exist and will affect the amount and pace that intermittent renewable energy can be incorporated without adverse impact or compromise. For example, the addition of renewable energy resources may necessitate the need to dispatch units uneconomically by displacing a more efficient unit with a less cost effective unit with a lower minimum loading and quicker response to meet reliability requirements and to minimize curtails of existing renewable resources. Accordingly, the reliability standards will affect "public interest" considerations, including the amount and pace of additions of renewables that is

reasonable. In addition, there will need to be consideration of the mitigation measures to be employed to accommodate the additions of renewables, which will necessitate a finding as to the reasonableness of the cost to ratepayers. These are issues that need to be explicitly addressed, but does not necessarily require NERC-like standards.[10]

Thus, based on the above, the Consumer Advocate does not object to the HECO Companies' RSWG and supports the implementation of Tier 1 and Tier 2 FIT programs on the HECO system. The Consumer Advocate believes that the RSWG should be convened quickly in order to address the further development of the details associated with the working group to begin assessing the MECO and HELCO systems.

DATED: Honolulu, Hawaii, March 23, 2010.

Respectfully submitted,

By /s/ Dean Nishina
DEAN NISHINA
Executive Director

DIVISION OF CONSUMER ADVOCACY

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[10] If the parties recommending NERC-like standards have a more timely, efficient process in mind to develop the proposed standards, the Consumer Advocate would be willing to consider the merit and weight of the evidence that supports any such proposal. The Consumer Advocate would expect, however, that any such evidence and/or analysis be applicable to Hawaii and not simply relying on the expectation that processes or procedures that work for interconnected, national systems will be directly transferable to island systems such as those served by the HECO Companies.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing **DIVISION OF CONSUMER ADVOCACY'S COMMENTS ON RELIABILITY STANDARDS** was duly served upon the following parties, by personal service, hand delivery, and/or U.S. mail, postage prepaid, and properly addressed pursuant to HAR § 6-61-21(d).

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